

## REMARKS

Applicants would like to thank Examiner Jaworski for the time and courtesy extended in a personal interview Tuesday, August 22 and in a telephone interview Friday, September 22. During the interviews, presently presented amendments to the claims and references cited on the accompanying Information Disclosure Statement were discussed.

Claims 1, 3-8, 10-13, 28, 30, 31, 33, 42-47, 49, 50, 52-54, and 56-76 are currently pending, including independent claims 1, 28, 42, 52, 62, 70, and 76.

The presently pending claims are generally directed to medical devices and methods for using the medical devices. For instance, presently pending independent claim 1 is directed to a medical probe device including an ultrasound transducer assembly. The ultrasound transducer assembly of claim 1 includes a housing that defines a probe guide opening through the housing. The medical probe device of claim 1 also includes a sterilizable seal. The seal is removably co-operable with the transducer assembly and includes a probe guide for receipt into the probe guide opening. The probe guide of the seal is such that it provides an unimpeded passageway through the seal. The seal also is adapted to enclose at least that portion of the housing that defines the probe guide opening. The medical probe device of claim 1 also includes a clamp adapted to secure a probe in the probe guide at a predetermined location.

In the Office Action, independent claims 1, 28, and 42 were rejected under 35 U.S.C. §102(b) as being anticipated by Kopp, et al. (U.S. Patent No. 4,108,165).

Kopp, et al. discloses a transducer probe that includes a cap having a stem and slot registration for use with a conventional radially slotted transducer probe. During use, the slot of the cap and the slot of the housing can be selectively placed into or out of registration for capturing and releasing a needle.

However, Kopp, et al. fails to disclose or suggest several limitations of the pending claims. For instance, Kopp, et al. fails to disclose or suggest a seal adapted to enclose at least that portion of the housing that defines a probe guide opening, as is found in pending independent claims 1, 28, and 42.

In addition, the slotted housing of Kopp, et al. does not provide a probe guide opening that can receive a probe guide within such that when viewing the assemblage in cross section, the probe guide opening completely surrounds the probe guide along at least a portion of the length of the probe guide opening, as is found in pending independent claim 28.

Moreover, Kopp, et al. fails to disclose or suggest a medical probe device including a clamp adapted to secure a probe in a probe guide at a predetermined position as is found in independent claims 1 and 42. Specifically and with reference to Figure 1 of Kopp, et al., when the notches 16 and 28 are out of registration, bore 14 and stem 26 form a closed cylindrical bore. The radially closed bore provides support and steadies the needle 42 as it is urged toward the cyst. (Col. 3, ll. 27-41.) This does not, however, clamp and secure the probe in the probe guide opening at a predetermined position, as the needle of Kopp, et al. remains free at all times to move in the longitudinal direction.

In the Office Action, independent claims 52, 62, 70, and 76 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kopp, et al. in view of Kelly, Jr., et al. (U.S. Patent No. 6,475,152) and further in view of Vilkomerson, et al. (U.S. Patent No. 4,249,539).

Initially, Applicants respectfully submit that the references cannot properly be combined as suggested. For example, and as argued in the previous Amendment dated December 20, 2005, in order to utilize the sterile clamp of Kelly, Jr., et al. to secure a biopsy device in the ultrasound imaging array of Kopp, et al., the slot of Kopp, et al. would be blocked. Such a combination would destroy the function and intended use of Kopp, et al. One of ordinary skill in the art would simply not attempt the suggested combination.

Moreover, even if the suggested combination were attempted, absent proper motivation to do so, the combined references would *still* fail to disclose or suggest limitations of the pending claims.

For instance, none of the references disclose or suggest forming a real time virtual image of the probe on a sonogram, as is found in independent claims 52 and 76.

In addition, none of the references disclose or suggest utilization of a motion detector for detecting the motion of a probe within either a probe guide opening, as is found in independent claims 52 and 76, or within a probe guide, as is found in independent claims 62 and 70.

For example, Vilkomerson, et al. discloses an imaging control that produces a superposition of two sets of signals, one set of signals being the total image field based on reflections back to the transducer 202 (as in conventional ultrasound imaging) and the other set of signals being a representation of the location of the point transducer that is based upon the delayed receipt of the incident signal of the other transducer (Col. 4, II. 41-47). Even if such an arrangement were to be combined with Kopp, et al. and/or Kelly, et al., absent proper motivation to do so, the combined references would still fail to disclose a motion detector that detects the motion of a probe within a probe guide opening or probe guide, as is required in independent claims 52, 62, 70, and 76. At best, Vilkomerson, et al. may detect the motion of the probe guide tip within the field in which the two sets of signals overlap one another. This field, i.e., the field in which the two sets of signals can be superimposed on one another, is defined by the total image field based on reflections back to the transducer 202. This field will thus be within the viewing field of the sonogram, e.g., within the patient. Applicants respectfully maintain that for at least for this reason, independent claims 52, 62, 70, and 76 patentably define over the cited references.

The above-cited references, as well as additional references, were also used to reject the pending dependent claims. Applicants respectfully submit, however, that at least for the reasons indicated above relating to corresponding independent claims 1, 28, 42, 52, 62, 70, and 76, the dependent claims patentably define over the references cited. However, Applicants also note that the patentability of the dependent claims does not necessarily hinge on the patentability of the independent claims. In particular, some or all of the dependent claims may possess features that are independently patentable, regardless of the patentability of the independent claims.

It is believed that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. Examiner Jaworski is invited

**Appl. No. 10/705,784  
Amendment Dated October 19, 2006  
Reply to Office Action of April 24, 2006**

and encouraged to telephone the undersigned, however, if any issues remain after consideration of this response.

Please charge any additional fees required by this Amendment to Deposit Account No. 04-1403.

Respectfully submitted,

DORITY & MANNING, P.A.

10/19/06  
Date

  
Christina L. Mangelsen, Patent Agent  
Reg. No. 50,244  
P.O. Box 1449  
Greenville, SC 29602  
(864) 271-1592  
(864) 233-7342 - Fax